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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/422,378	10/21/1999	TATSUYA SHIMODA	9319T-000011	5460

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HARNES DICKEY & PIERCE PLC
P O BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

WILLIAMS, KEVIN D

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 05/14/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/422,378

Applicant(s)

SHIMODA ET AL.

Examiner

Kevin D. Williams

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 13-18 and 27-50 is/are pending in the application.
- 4a) Of the above claim(s) 45-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 13-18 and 27-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 27-32, 34, and 35 is rejected under 35 U.S.C. 102(e) as being anticipated by Pannekoek (4,748,464).

Pannekoek teaches a printing device comprising a head 10 being a first rotary drum placed in a position so that the head forms an electric field towards an electronic paper, a plurality of pixels 2,4 on the head, each pixel independently forming an electric field, a plurality of first electrodes 2,4 each corresponding to a respective pixel, a second electrode 12 being a second rotary drum and opposing the first drum, and a mechanism for rotating at least one of the first rotary drum and the second rotary in a direction opposite to the direction that the other drum rotates.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 8, 9, 11, 13-16, 37-40, and 42-44 are rejected under 35

U.S.C. 103(a) as being unpatentable over Vincent (5,866,284) in view of Pannekoek.

Vincent teaches a printing system comprising a plurality of capsules 100 that are caused to move by applying an electric field, a drum-shaped head 210 having a curved shape with a surface for holding an electric charge, a pair of drums 210,250, another drum having on an outer circumferential surface a common electrode that form an electric field together with said surface of the drum-shaped head, and an erasing head 230.

With respect to claims 37-40, Vincent teaches a first drum head 230 that forms an electric field for resetting a pre-written pattern, a second drum head 210 that writes a pattern.

Vincent does not teach a drum-shaped head having on an outer circumferential surface a plurality of pixels in a matrix that form electric fields, the first and second heads comprising a plurality of electrodes, and each of the electrodes corresponding to a respective pixel.

Pannekoek teaches a drum-shaped head 10 having on an outer circumferential surface a plurality of pixels 2,4 in a matrix that form electric fields, a plurality of electrodes 2,4, and each of the electrodes corresponding to a respective pixel.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vincent to have the pixel electrodes on the outer circumference of the drum as taught by Pannekoek, in order to more accurately control the images areas,

since the electric field on a particular point on the drum can be changed up until the moment right before that point touches the paper. In the Vincent device the field can not be changed on a particular point once that point passes the corona charger.

5. Claims 6, 7, 17, 18, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent in view of Pannekoek as applied to claims 1-5, 8, 9, 11, 13-16, 37-40, and 42-44 above, and further in view of Haas et al. (6,100,909).

Vincent in view of Pannekoek teach the claimed invention except for the plurality of switching elements.

Haas teaches an electronic paper printer comprising a plurality of switching elements.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vincent in view of Pannekoek to have the plurality of switching elements as taught by Haas, in order to accurately control the image forming process.

6. Claims 33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pannekoek in view of Haas et al. (6,100,909).

Pannekoek teaches the claimed invention except for the plurality of switching elements.

Haas teaches an electronic paper printer comprising a plurality of switching elements.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Pannekoek to have the plurality of switching elements as taught by Haas, in order to accurately control the image forming process.

Response to Arguments

7. Applicant's arguments filed 3/10/2003 have been fully considered but they are not persuasive.

Applicants argue that claims 27 and 34 call for a printing device which writes a pattern on an electronic paper with an electric field. The preambles of claims 27 and 34, however, recite a printing device followed by an intended use statement indicating that the printing device is intended for writing a pattern on an electronic paper. The electronic paper is therefore not a positive part of the invention. Furthermore, although the Pannekoek reference does not expressly disclose electronic paper, the Pannekoek device is capable of performing the recited intended use of the printing device.

Applicants also argues that Pannekoek does not teach pixels. Applicants argue that the Pannekoek electrodes are unable to be activated selectively as pixels. Electrodes 2 and 4 of Pannekoek form pixels at certain intersections indicated at 5. The pixels 5 can be selectively activated by block 3. See column 3, lines 3-5.

Applicants argue that Vincent teaches away from the use of electrodes and that this teaching away is evidenced by column 2, lines 13-27 of Vincent. Vincent points to several factors in asserting that the use of electrodes is impractical, including cost and print speed. Vincent, however, does not teach away from the use of electrodes in a

manner that would indicate that electrodes would not be compatible with the invention. In fact, Vincent notes that the use of electrodes provides the advantage of a compact printer. While using electrodes might be more expensive and inferior to other methods, Vincent indicates that it is conventional to use electrodes arrays and that they are even advantageous. Therefore, Vincent does not teach away from the use of electrodes in a manner that overcomes the outstanding rejection. See MPEP 2145 (X)(D)(1).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin D. Williams whose telephone number is (703) 305-3036. The examiner can normally be reached on Monday - Friday, 8:30am - 6:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (703) 305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

KDW
May 7, 2003


ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800